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REMARKS

This paper is responsive to any paper(s) indicated above, and is responsive in any other manner indicated below.

PENDING CLAIMS

Claims 1-20 were pending, under consideration and subjected to examination in the Office Action. Appropriate claims have been amended, canceled and/or added (without prejudice or disclaimer) in order to adjust a clarity and/or focus of Applicant's claimed invention. That is, such changes are unrelated to any prior art or scope adjustment and are simply refocused claims in which Applicant is present interested. At entry of this paper, Claims 1-20 will be pending for further consideration and examination in the application.

REJECTION UNDER 35 USC '103

All 35 USC '103 rejections are respectfully traversed. However, such rejections have been rendered obsolete by the present clarifying amendments to Applicant's claims, and accordingly, traversal arguments are not appropriate at this time. However, Applicant respectfully submits the following to preclude renewal of any such rejections against Applicant's clarified claims.

All descriptions of Applicant's disclosed and claimed invention, and all descriptions and rebuttal arguments regarding the applied prior art, as previously submitted by Applicant in any form, are repeated and incorporated hereat by reference. Further, all Office Action statements regarding the prior art rejections are

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respectfully traversed. As additional arguments, Applicant respectfully submits the following.

In order to properly support a §103 obviousness-type rejection, the reference not only must suggest the claimed features, but also must contain the motivation for modifying the art to arrive at an approximation of the claimed features. However, the cited art does not adequately support a §103 obviousness-type rejection because it does not, at minimum, disclose (or suggest) the following limitations of Applicant's clarified claims.

Applicant's disclosed and claimed invention is directed to map generation arrangements (e.g., devices, methods, computer-implemented programs) which improve an accuracy of map generation, while at a same time, lessen work required of a person (e.g., user) using the map generation arrangements. More particularly, the inventors found that if mapping generation was conducted purely automatically, significant errors were present in maps resultant from the automated approach. That is, as one example, in forming a map from an ariel view, an automated system cannot discriminate between a cement patio and white-rubberized roof, i.e., often the cement patio is detected as a building. The same can happen with dark rectangular parking lots.

In short, the human eye and intuitiveness has much better accuracy at recognizing building structures than purely automated systems. On the other side of the coin, it is too burdensome to require that a user carefully define all of the peripheral boundaries of each building. Applicant's invention provides improvement by combining user discrimination of building regions together with significant automation. More particularly, with building recognition with Applicant's invention, a

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user must first designate at least one position of a portion (e.g., a roof) of a building. Thereafter, units (e.g., a polygon extraction unit, vector generation unit) automatically use the at least one position to detect the building region (e.g., roof outline). By using slight human intervention, accuracy is greatly increased.

Regarding the applied references, such teach either total automation approaches, or total human (i.e., manual) outlining approaches. In any event, no single reference or combination of references disclosed or suggests allowing a user to first designate (i.e., appoint) a position on a building, and then conducting detection thereafter.

As another important feature, Applicant's invention extracts at least one pixel from pixels within a building region based on a result of discriminating a color of the pixels around the building region to compare whether the pixels are within a gray-level variance of a predetermined discrimination threshold. That is, Applicant's invention determines a discrimination threshold, and compares to see whether each pixel is within the discrimination threshold. Regarding pixels within the threshold, the building region is set to include such extracted pixels as a portion of an extracted building region. The extracting and setting operations are repeated (e.g., a number of times) to expand the extracted building region with more extracted pixels, until an entirety of the building region is extracted.

Regarding the applied references, no single reference or combination of references discloses or suggests comparing whether the pixels are within a gray-level variance of a predetermined discrimination threshold to set the same as extracted pixels of an extracted building region. And doing so repeatedly over time, to expand the extracted building region with more extracted pixels.

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In terms of distinguishing claim language, independent claim 1, for example, claims: A map generation device, comprising: an image appointment unit that **receives user appointment** of at least one position in a building existing within an aerial photograph to designate the at least one position as part of a building region; a polygon extraction unit that **extracts at least one pixel from pixels within the building region based on a result of discriminating a color of the pixels around the building region to compare whether the pixels are within a gray-level variance of a predetermined discrimination threshold, sets the building region to include extracted pixels as a portion of an extracted building region, and repeats the extract and set operations to expand the extracted building region with more extracted pixels**, and then extracts a polygon line of the extracted building region; and a vector generation unit that generates a vector of the polygon line of the extracted building region. Other ones of Applicant's claims contain similar or analogous features/limitations.

In addition to the foregoing, the following additional remarks from Applicant's foreign representative are also submitted in support of traversal of the rejection and patentability of Applicant's claims.

Some important features of this invention are:

- (1) designating at least one position on a building existing within an aerial photograph as a part of a building region upon reception of a user's appointment of the position (refer to step 401); and
- (2) extracting the ultimate boundary of the building region **by repeating the process of adding pixels** in the building region to the pixels belonging to the building

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region based on the discrimination using the colors of the building region to expand the range of the building region (refer to P14, L21 to P15, L18, and FIG. 8).

Thus, an important feature of Applicant's invention resides in that the detection region is expanded based on information including the appointed position.

With regard to Kacryra et al. (US Patent Application No. 09/177,913; US 6,246,468), Office Action comments point to Col.1, lines 26 to 34 of Kacryra et al. In the description, it is intended that a user selects the region within the real world which is to be scanned with a laser scanner through a window to scan the 3-ID geometry surface of objects in the area. Accordingly, the cited document has no relationship with Applicant's claimed invention which relates to arrangements for processing images which have already been acquired.

US 6,246,468 includes the description regarding "Scan control" (refer to Col.22, L62-) which relates, in particular, to a description regarding a process using a mouse and the like (refer to Col.23, 1.2-). However, the process is only for specifying an object to be scanned into an image. In the cited document, the object of a model generation from an image is determined by specifying the field as described in "Segmentation" (refer to Col.24, L25-). Accordingly, unlike in the present invention, there is no description of expanding the appointed position.

Accordingly, even by any combination of the cited documents, the following point is not taught. That is, the appointment position is discriminated as the building region and then the building region is determined by "repeating the process of adding the pixels around the building region to the pixels belonging to the building region" based on "the discrimination by using the colors of the building region".

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According to this invention, in the process of gradually expanding the range of the building region, the colors used for each discrimination are also changed. Therefore, a modest change in the colors allows the extraction of a building region. In regard to this point, a reference color is not changed in Nideorost.

As a result of all of the foregoing, it is respectfully submitted that the applied art (taken alone and in the Office Action combinations) would not support a '103 obviousness-type rejection of Applicant's claims. Accordingly, reconsideration and withdrawal of such '103 rejection, and express written allowance of all of the '103 rejected claims, are respectfully requested.

EXAMINER INVITED TO TELEPHONE

The Examiner is herein invited to telephone the undersigned attorneys at the local Washington, D.C. area telephone number of 703/312-6600 for discussing any Examiner's Amendments or other suggested actions for accelerating prosecution and moving the present application to allowance.

RESERVATION OF RIGHTS

It is respectfully submitted that any and all claim amendments and/or cancellations submitted within this paper and throughout prosecution of the present application are without prejudice or disclaimer. That is, any above statements, or any present amendment or cancellation of claims (all made without prejudice or disclaimer), should not be taken as an indication or admission that any objection/rejection was valid, or as a disclaimer of any scope or subject matter. Applicant respectfully reserves all rights to file subsequent related application(s)

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(including reissue applications) directed to any/all previously claimed limitations/features which have been subsequently amended or cancelled, or to any/all limitations/features not yet claimed, i.e., Applicant continues (indefinitely) to maintain no intention or desire to dedicate or surrender any limitations/features of subject matter of the present application to the public.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims listed above as presently being under consideration in the application are now in condition for allowance.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR 1.136. Authorization is herein given to charge any shortage in the fees, including extension of time fees and excess claim fees, to Deposit Account No. 01-2135 (Case No. 1213.43404X00) and please credit any excess fees to such deposit account.

Based upon all of the foregoing, allowance of all presently-pending claims is respectfully requested.

Respectfully submitted,

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